

[0044] The graph of FIG. 3a can also be considered in a different way. For coins of the true denomination that corresponds to the normal acceptance window (NAW), the most likely value of parameter  $x_1$  is the peak value  $x_p$  and the least likely value occurs at the upper and lower window limits  $w_1, w_2$ . Whilst it is possible for an acceptable value  $x_f$  to occur close to one of the window limits  $w_1$ , the probability distribution shown in FIG. 3a makes it clear that it is unlikely that many such values  $x_f$  ~~win will~~ occur for the true coin concerned. If several values  $x_f$  occur, this is more likely to indicate the presence of a fraudulent distribution 23 as shown in dotted outline, with a peak value ~~centred~~ centered on or around  $x_f$ . This property is used in accordance with the invention to discriminate between true coins and a set of frauds that have been manufactured to the same design, or foreign coins, which produce coin parameter values  $x_f$  lying within the normal acceptance window NAW. In accordance with the invention, the occurrence of more than one parameter value  $x_f$  is considered to be unusual and likely to represent the occurrence of a fraud. A restricted acceptance window RAW shown in FIG. 3a is used upon detection of such a situation, as will now be described.

[0071] Now, having inserted 5 true coins, the fraudster may decide to attempt another fraudulent coin. The fraudulent coin is inserted and the parameter  $x_{\text{sub.}17}$  determined and sent to the processor at step S1. The IF statement of step S2 is false as  $\text{timer\_secure} \neq 0$  and so  $n\_max$  and  $t\_max$  remain at the increased values 7 and 36 respectively. The query of step S3 may return a negative response as  $t$  it could still be at  $t>0$ , however, step S4 will now return a positive response because  $n=0$ . This results in a comparison of the fraudulent coin parameter  $x_{17}$  with the normal acceptance window. The parameter  $x_{17}$ , although coming from a fraudulent coin, could fall inside this window in which case it would be accepted at step S8. The parameter  $x_{17}$  is likely